

**MONTHLY REPORT OF HYDROLOGIC CONDITIONS**

REPORT FOR:  
MONTH      YEAR  
**April      2015**

TO: Hydrometeorological Information Center, W/OH2  
NOAA / National Weather Service  
1325 East West Highway, Room 7230  
Silver Spring, MD 20910-3283

SIGNATURE  
**Alan E. Gerard, Meteorologist In-Charge**

DATE  
**6/2/2015**

*When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)*



An X inside this box indicates that no river flooding occurred within this hydrologic service area.

**Synopsis...**

The month of April 2015 was a warmer than normal, particularly for the central and southern areas of the HSA (Hydrologic Service Area). Hattiesburg averaged a whole 5 degrees above the normal monthly average temperature. The ASOS (Automated Surface Observing System) locations along I-20 including Vicksburg, Jackson, and Meridian were between 3 to 4 degrees above the normal monthly average temperature. The Delta locations (Greenville and Greenwood) were both right at 3 degrees above normal. Precipitation-wise, the following areas received from 100 to 160 percent of normal rainfall: Northeast Louisiana, much of Southeast Arkansas, and over an area from Washington/Bolivar Counties to Lowndes County. Much of the remainder of the HSA received from 40 to 90 percent of normal. The driest locations, those with less than 50 percent of normal rainfall, were from Leake County to Dekalb County and from Lamar to southern Jasper County.

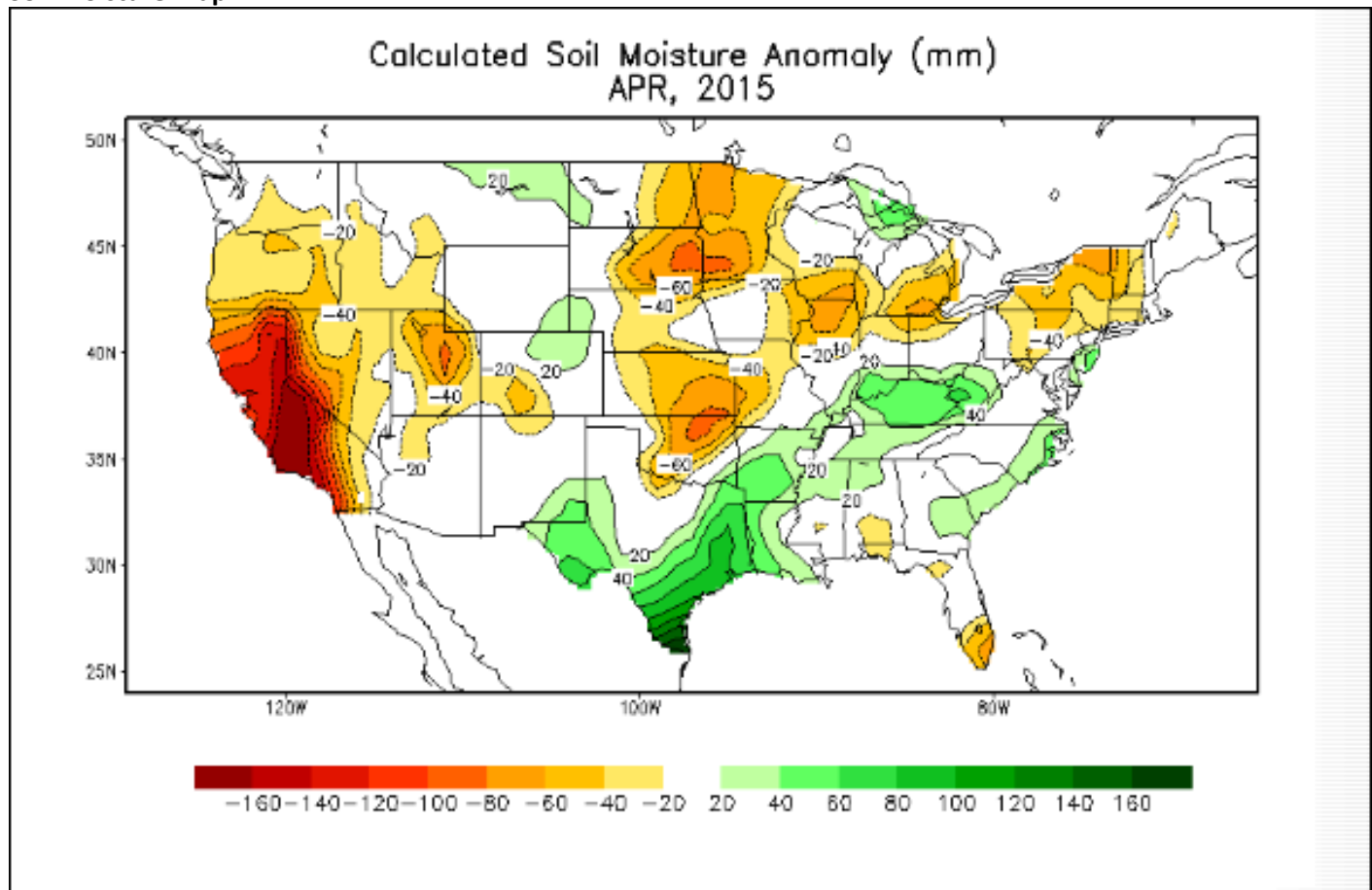
The month began with return southerly flow from the Gulf of Mexico bringing warmer and more humid conditions. On the 2<sup>nd</sup>, large hail and high winds occurred across northern portions of the HSA. Only a half an inch or less of reported was reported. A cold front pushed across the area from late on the 3<sup>rd</sup> into the 4<sup>th</sup> bringing with it from ½ to 2 inches of rainfall from Northeast Louisiana to East Central Mississippi. Seasonably cooler and drier air pushed in behind the front. High pressure moved into the region and shifted east on the 6<sup>th</sup> allowing increasingly warm and humid conditions to return through the 9<sup>th</sup>.

A cold front moved through the region from the 10 into the 12<sup>th</sup> bringing cooler, more seasonable temperatures. Rainfall from 1 to 2 inches was observed. From the 13<sup>th</sup> to the 20<sup>th</sup>, a series of upper level low pressure systems and troughs moved through the region from the southwestern U.S. ushering in a period of wet and cloudy conditions. Several small tornadoes were reported in Hinds, Scott, and Leake counties just ahead of a cold front pushing into the HSA late on the 13<sup>th</sup>. The front stalled on the 14<sup>th</sup> as a surface low pressure center slowly moved along the stalled front system. The front finally pushed to the Mississippi Coast by the 17<sup>th</sup>. Rainfall from the 13<sup>th</sup> to 17<sup>th</sup> ranged from 1 to 5 inches. Some large hail was reported south of I-20 on the 15<sup>th</sup>. The frontal system pushed back northward on the 19<sup>th</sup> as a warm front. A strong cold front pushed through on the 20<sup>th</sup> bringing some cooler drier air into the area. From 18 to 20<sup>th</sup>, 1/2 to 3 inches of rainfall fell from Southwest Mississippi to East Central Mississippi.

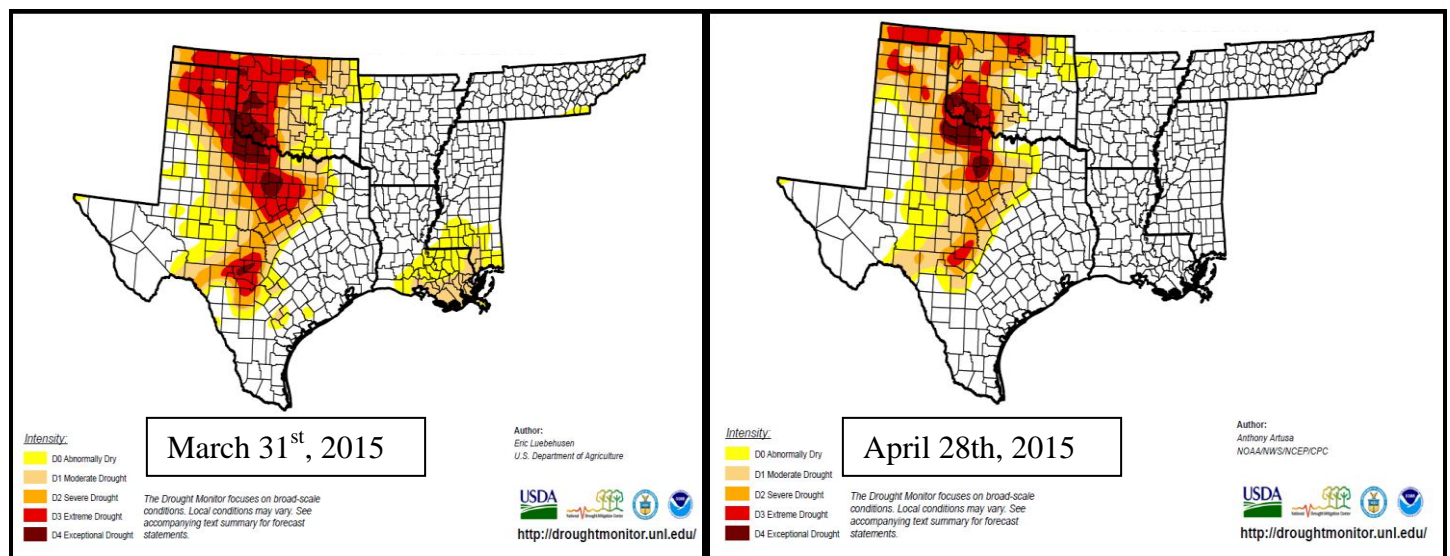
Another cold front pushed into the HSA on the 22<sup>nd</sup> and slowly moved to the Mississippi Coast by the 24<sup>th</sup>. Rainfall from ½ to 1.5 inches fell north of I-20 and Northwest of Natchez Trace Parkway. Cooler temperatures were noted behind the front. Late on the 24<sup>th</sup> and into the 25<sup>th</sup>, the front surged north of the region as a warm front bringing with it ½ to 3 inches of rainfall, mostly north of I-20. A total of 7 weak tornadoes were reported from Northeast Louisiana to East Central Mississippi during this time period. Another strong cold front pushed across the area on the 26<sup>th</sup> and 27<sup>th</sup>. Rainfall totals across southern portions of the HSA ranged from ½ to 1 inch. High pressure dominated until yet another cold front pushed into the northern HSA late on the 30<sup>th</sup>.

## River and Soil Conditions

### Soil Moisture Map:

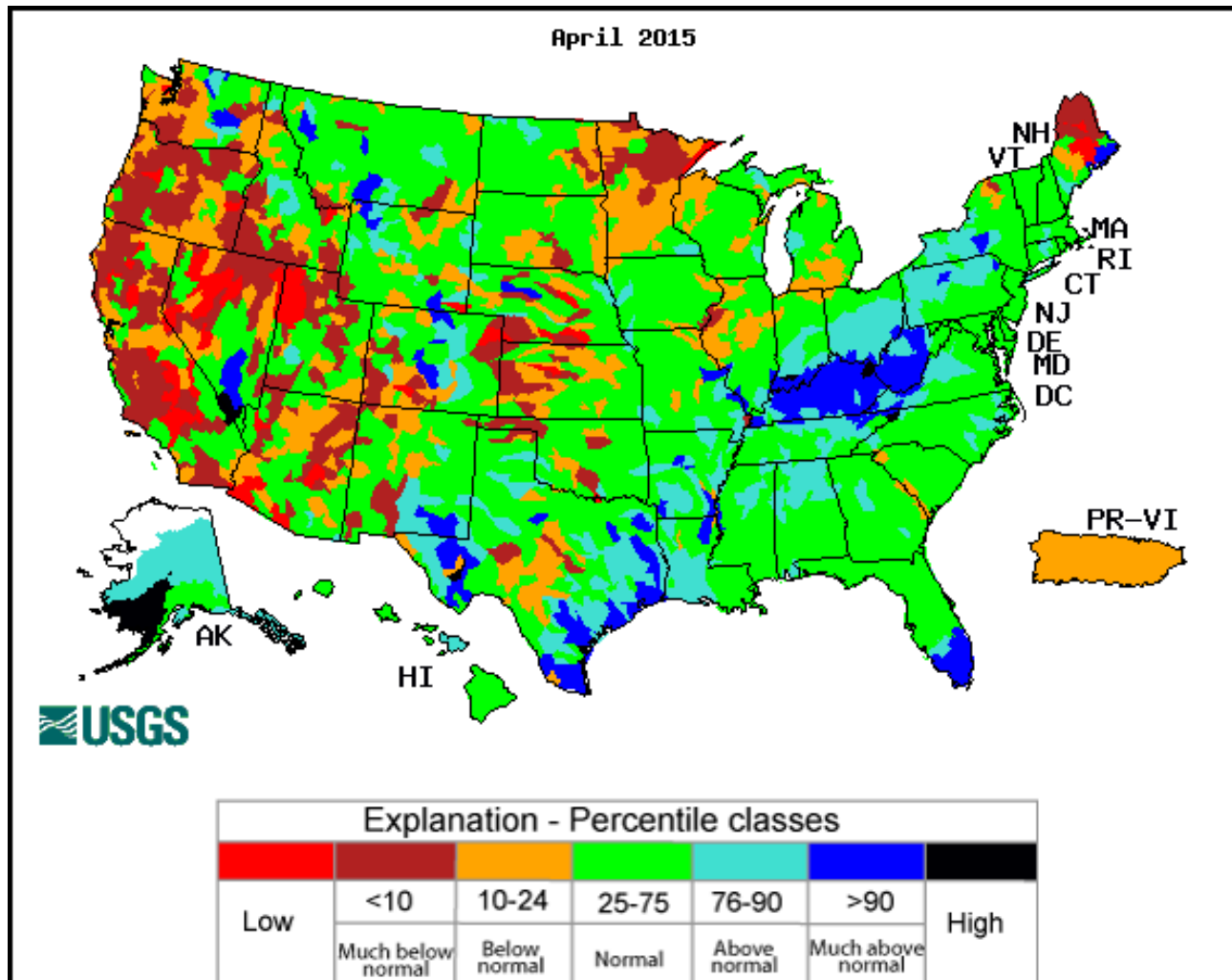


### Drought Comparison:



**Streamflow:**

The United States Geological Survey's (USGS) April 2015 river streamflow records were compared with all historical April streamflow records. The average streamflow for this April was above normal for the Big Black River and a portion of the Tombigbee River while much above normal streamflows were observed across the Deer Creek basin in West Mississippi and the Bayou Bouef and Bayou Barthomew Basins in Northeast Louisiana. The rest of the HSA experienced normal streamflow.

**River Conditions:**

Flooding occurred in the Big Black, Tuscolameta Creek, Chickasawhay, and the Mississippi River. For the conditions of the Mississippi River from Arkansas City to Natchez, refer to the hydrographs on the next page.

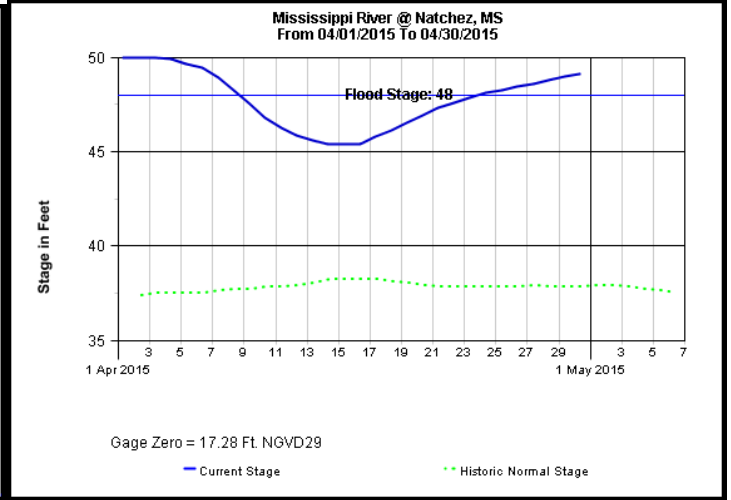
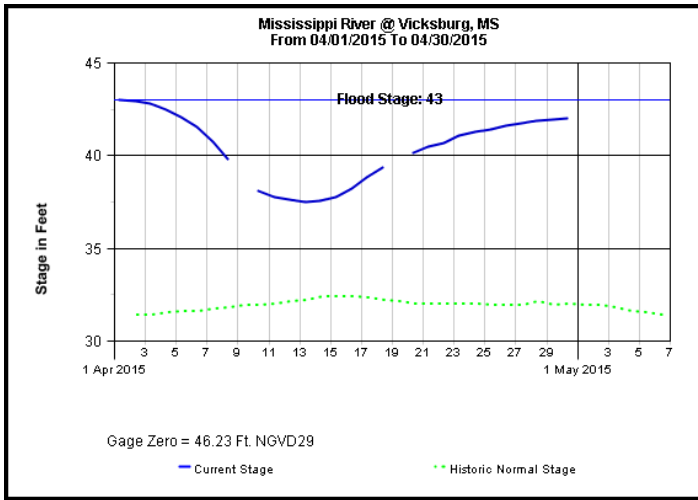
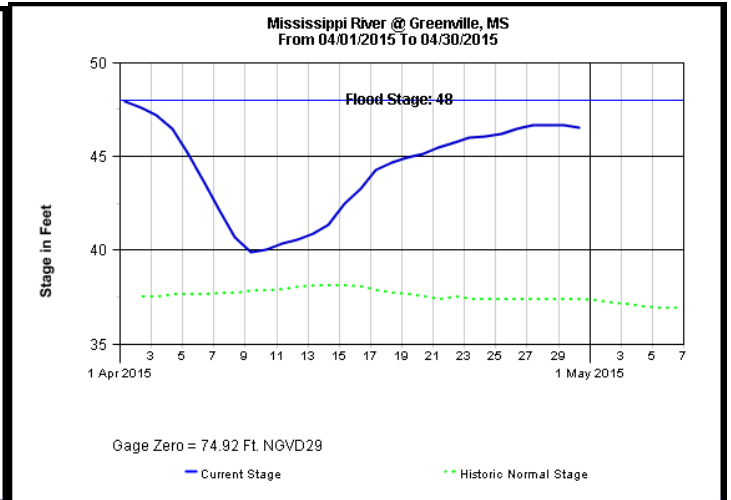
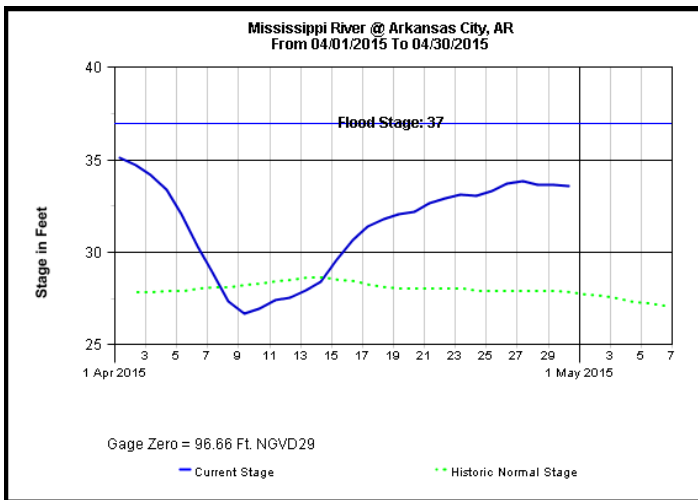
**Climatic Outlook and Flood Potential:**

The climatic outlook shows equal chances for above, below, and normal temperatures over the next three months for the entire HSA. In regards to precipitation, the outlook predicts above normal precipitation amounts over the next three months for the entire HSA. Thus, based on current soil moisture, streamflow, and the 3-month weather outlook, the flood potentials are as follows:

Pearl River System: Normal.  
Yazoo River System: Normal.  
Big Black River System: Normal.  
Homochitto River System: Normal.  
Pascagoula River System: Normal.  
Northeast LA and Southeast AR: Normal.  
Tombigbee River System: Normal.  
Mississippi River: Normal.

# Mississippi River Plots April 2015

## Plots Courtesy of the United States Army Corps of Engineers



### Monthly Preliminary High and Low Stages:

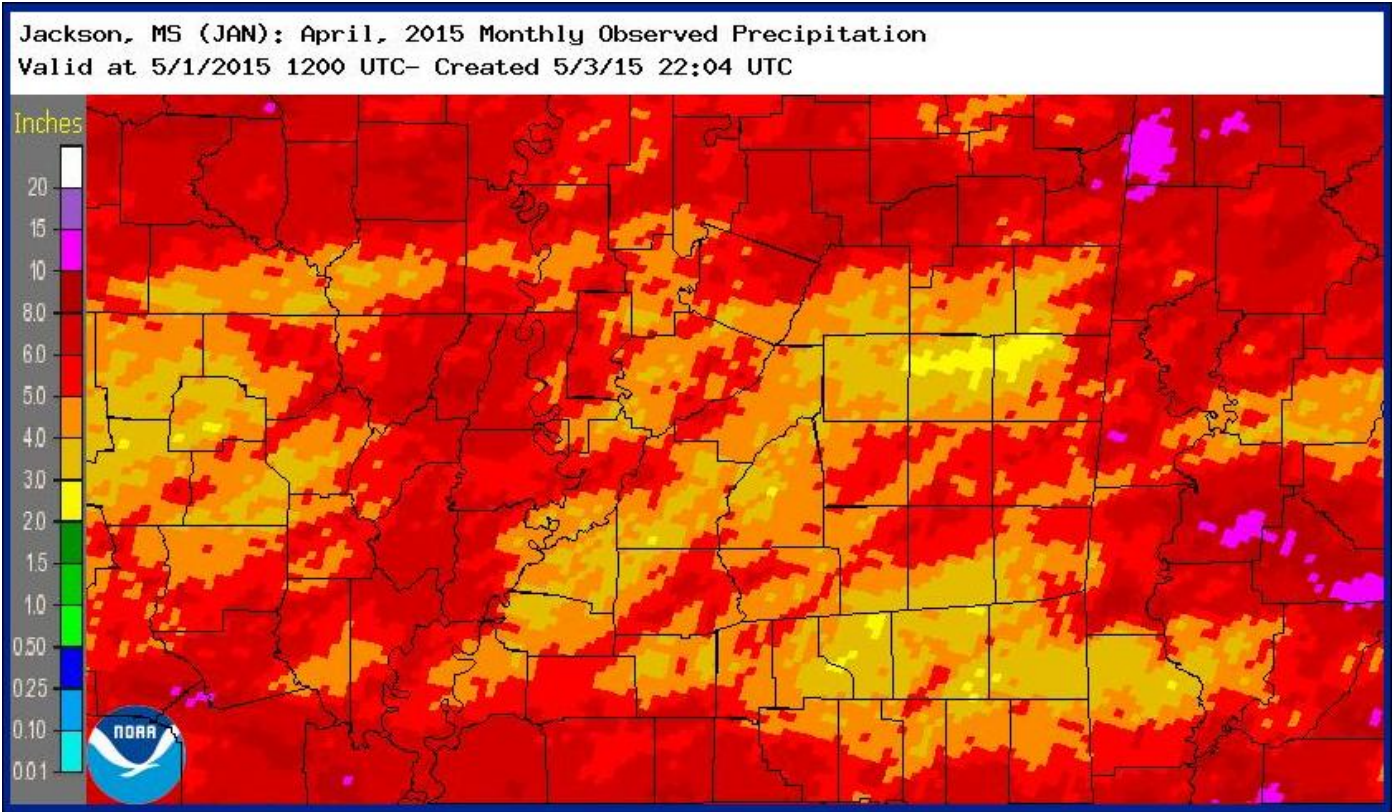
Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	37	35.20	4/01	26.60	4/09
Greenville	48	47.96	4/01	39.85	4/09
Vicksburg	43	43.03	4/01	37.50	4/12
Natchez	48	50.04	4/02	45.34	4/15



## Rainfall for the Month of April

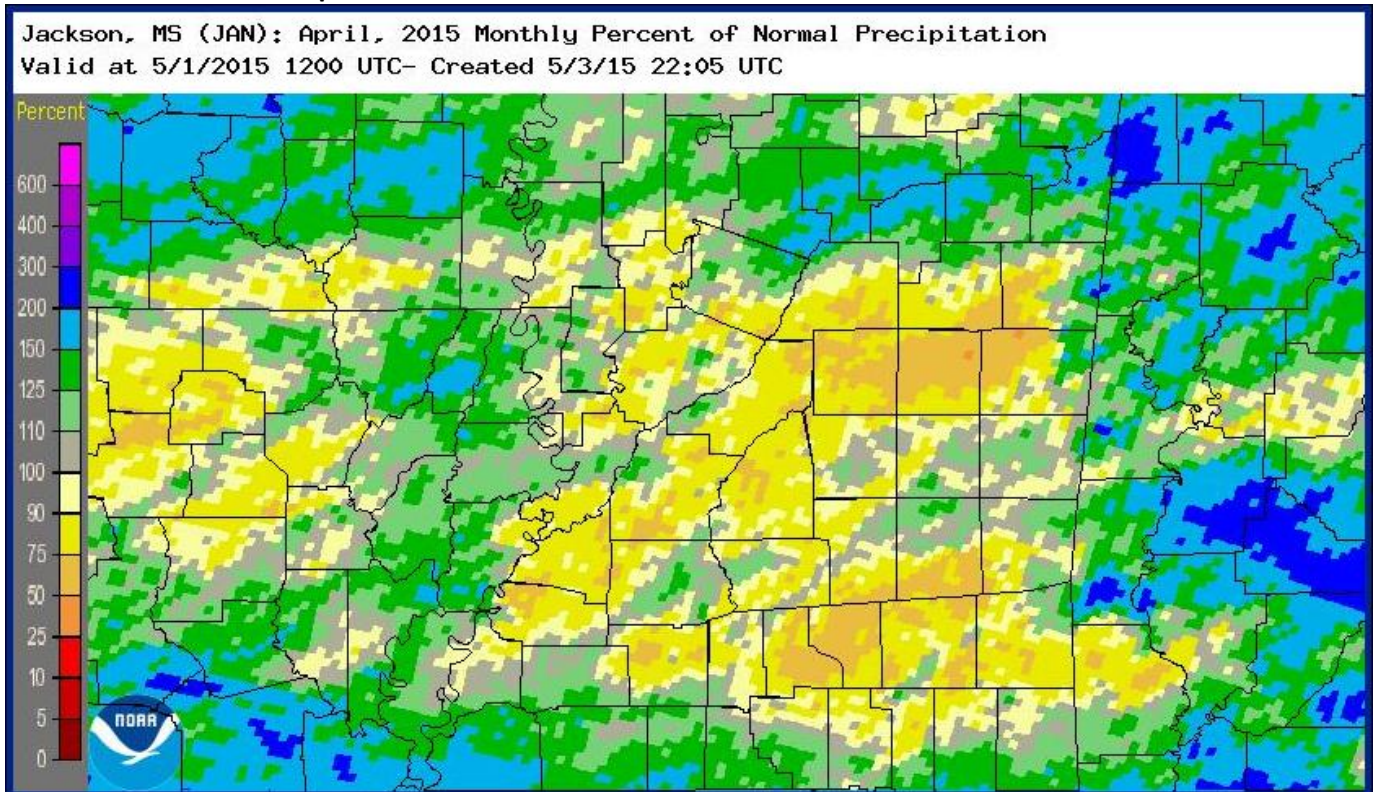
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on March 31st until 7 am on April 30<sup>th</sup> were: 8.86 inches at Vaiden, MS; 8.21 inches at Dermott, MS; 7.67 inches at Winona, MS; 7.36 inches at Grenada Dam, MS; 7.18 inches at Jonesville L&D, LA; 6.98 inches at Starkville, MS; 6.75 inches at Moorhead, MS; 6.74 inches at Duncan, MS; 6.64 inches at Vicksburg, MS; 6.59 inches at Lake Providence, LA; and 6.54 inches at Newton, MS .

### April Rainfall Estimates:



Note: Observer rainfall and MPE may differ due to time differences.

### April Percent of Normal Precipitation:



Note: Observer rainfall and MPE may differ due to time differences.

**April Rainfall for Selected Cities:**

City (Airport)	Rainfall	Departure from Normal	2015 Rainfall	2015 Departure from Normal
Jackson (KJAN)	3.75	-1.21	21.22	+1.49
Meridian (KMEI)	5.15	+0.37	20.90	-0.03
Greenville (KGLH)	4.28	-0.53	15.34	-4.01
Greenwood (KGWO)	6.40	+1.27	15.80	+2.55
Hattiesburg (KHBG)	3.37	-1.21	16.91	-4.30
Vicksburg (KTVR)	6.04	+1.07	21.53	+1.19

Total Flood Warning products issued: 13

Total Flood Statement products issued: 75

Total Flood Advisories MS River: 25

Daily Climate and Ag WX Products (AGO'S) issued: 30

Daily CoCoRaHS Rainfall Products (LCO'S) issued: 30

Daily River and Lake Summary Products (RVD'S) issued: 30

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&

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District  
USGS Ruston District  
USACE Mobile District  
USACE Vicksburg District  
USACE Mississippi Valley Division  
USGS Mississippi District  
SRH Climate, Weather and Water Division  
Lower Mississippi River Forecast Center  
Pearl River Valley Water Supply District  
Hydrologic Information Center  
Southern Region Climate Center  
Pat Harrison Waterway District  
Pearl River Basin Development District